DOCUMENT RESUME

ED 187 462 PS 011 482

AUTHOR Otey, John W.
TITLE A K-2 Screening Instrument.
PUB DATE Feb 80
NOTE 12p.; Paper presented at the Annual Meeting of the Southwestern Educational Research Association (3rd, San Antonio, TX, February, 1980).

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Educational Responsibility; Laws; *Learning Problems; Primary Education; *Screening Tests; *State Programs; *Test Construction; Test Norms
IDENTIFIERS *Oklahoma

ABSTRACT

In line with the current trend toward more diagnostic testing in the public schools, the State of Oklahoma has adopted a mandatory screening program for all kindergarten, first, and second grade students. This paper discusses the six-year development, norming, and implementation of the new 58 item, teacher administered and scored screening instrument upon which Oklahoma's diagnostic testing program is based. Problems associated with large scale screening programs are discussed. Particular emphasis is placed on a systems approach to implementing educational screening. Directions, test questions, scoring criteria and test norms are provided. (Author/RH)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED187462

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

A K-2 Screening Instrument

John W. Otey
Department of Applied Behavioral Studies
Oklahoma State University

Paper presented at the annual meeting of the Southwest Educational Research Association, 1980.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

John W. Otey

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS011482

A K-2 Screening Instrument

In line with the current trend toward more diagnostic testing in the public schools, the State of Oklahoma has adopted a mandatory screening program for all kindergarten, first, and second grade students. This paper discusses the six-year development, norming, and implementation of the new 58 item teacher administered/scored screening instrument upon which this program is based. Problems associated with large scale screening programs such as this are discussed; particular emphasis is placed on the systems approach.

A Kindergarten, First , & Second Grade

Screening Program

This deckade has seen a dramatic increase in the practice of testing in the schools. While some educators have questioned the practice, it appears to be quite soundly established and shows no promise of decline in the immediate future. Within the testing movement the segment showing the greatest growth is that of educational diagnostics.

Preliminary to the diagnostic battery a screening test is often used. This brief, often group admininsered by a classroom teacher, test serves to identify the student in need of diagnostic testing who might otherwise go unnoticed. The screening test does not in itself provide a detailed diagnostic map of student academic difficulties, it gives only a general indication of troublesome areas which are subsequently evaluated on an individual basis. It is this, the screening test, the first step in the educational diagnostic/prescriptive process, which is the central topic of this paper.

Screening Programs

A great many screening tests have been devised and corresponding programs implemented. In general, they may be grouped into the following categories: (a) health(Eoyce, 1973; Hull, 1973; Nitowsky, 1973; Snyder, 1973), (b) developmental (Jackson, 1973; Nugent, 1976), (c) pre school (Mardell, 1975), (d) kindergarten/academic readiness (Denson & Michael, 1974; Lesiak & Wait, 1974), (e) first grade learning difficulties (Hartlage & Lucas, 1973; Telegdy, 1975), and (f) specialized areas such as reading and arithmetic readiness and learning disabilities (Bock, 1974;

Eaves, 1974; Logan, 1975). While each approach has its merits, many share a number of common deficiencies. These are: (a) being too limited in areas covered, (b) requiring trained examiners, (c) being too limited in ages of students screened, (d) necessitating use of special equipment, (e) requiring individual administration, and (f) being impractical for large scale screening due to scope of facilities required, amount of time involved, and excessive cost per student.

Thus, while many screening programs have been implemented, few have survived due to the forementioned difficulties. Those which provided good results were impractical; and those which were practical to administer provided the classroom teacher with little information.

Oklahoma's Plan

In 1974, when a number of states were beginning to implement screening programs, the Oklahoma State Legislature passed a most important piece of legislation, Senate Bill 581, The Prescriptive Teaching Act. This legislation set up the vehicle by which a systems approach to educational screening could be implemented. Central to the Oklahoma plan was the establishment of twenty Regional Education Service Centers, each serving approximately four counties. Each Center included in its staff psychometrists and prescriptive teachers familiar with the various categories of remedial/special education. The responsibility was given to the Centers to ensure that each student in kindergarten, first, and second grades was screened for possible learning difficulties and that educational prescriptions would be provided for those students identified as high risk. The Centers were further given the responsibility of pro-

viding media, equipment, and inservice programs to teachers within their service areas. Thus, a complete systems approach to educational screening was established.

The OSI

Subsequent to establishment of the Regional Education Service Centers was the development of a screening instrument, the OSI. This instrument was completed and normed this past Summer after six years of pilot instruments and data collection in the public schools. Because the OSI was to be used with every kindergarten, first, and second grade student in the State, approximately one-hundred-thousand, it was essential that the instrument meet the following criteria: (a) be simple to administer and score, (b) be administerable by classroom teachers with minimal psychometric training, (c) take little time and cause few class disruptions, (d) provide immediate educational feedback to the teacher, (e) be applicable in school districts ranging from small rural to large urban in type, (f) be as inexpensive as possible, and (g) provide a basis for further diagnostics.

A committee composed of prescriptive teachers, psychometrists, and school psychologists met beginning in 1974 for the next five years to develop an instrument which met these criteria. The OSI consists of fifty-eight items reqresenting the core areas of (a) general information, (b) visual - motor skills, (c) reading, and (d) arithmetic. A portion of the instrument is group administerable; the remainder requiring 1:1 administration. Total time of administration for a classroom teacher is approximately twenty minutes which includes scoring of the items.

Upon completion of the OSI the classroom teacher can instantly compare a student with the norms to determine whether further diagnostic testing should be requested from the Service Center. The teacher is encouraged to retain the test sheets as a preliminary work base until a formal educational prescription is written.

OSI Statistical Analysis

During the Spring semester, 1979 five Centers, providing a cross-sectional representation of the State's schools, distributed the OSI to over seventeen-thousand students, grades K - 2. All tests were administered and scored by classroom teachers according to standardized instructions. Mean scores, standard deviations, standard error of measurement, mean difficulty, mean discrimination and reliability coefficients were then computed for each grade level (see table 1). Scores were plotted in order to verify distribution characteristics. It will be noted (see figure 1) that distinct, essentially normal distributions, were obtained for each grade level. Cut off scores, below which a referral for individual diagnostics would be made, were determined to be $\bar{X}$-1 SD for each grade level (see table 1). The reader will also note that at the kindergarten and first grade levels a score greater than $\bar{X}$+2 SD (approx.) may be used to identify possibly gifted students. For second grade the ceiling was too low to permit screening of gifted.

Insert Table 1 and Figure 1 about here

Implications

Comments thus far have generally been supportive of the OSI. While some teachers have voiced displeasure at having to administer and score the instrument, most have expressed confidence that the OSI screening program is worthwhile. Many teachers use the screening sheets as a basis for preliminary remedial work pending an in-depth diagnostic battery. All teachers report a better understanding of their students; this is especially valuable since the OSI is administered early in the Fall each school year. Center psychometrists report that the screening results provide a useful adjunct to the usual teacher referral for examination forms which are filled out when a request for a diagnostic battery is made. Predictive validity studies are currently under way to determine the accuracy of the present 12 - 15% referral rate.

References

Bock, R. M. Predicting reading failure: a screening battery for kindergarten. Journal of Learning Disabilities, 1974, 7, 43-47.

Denson, T. A. , & Michael, W. E. The rutgers drawing test as a mid-year kindergarten predictor of end-of-kindergarten readiness for first grade. Educational and Psychological Measurement, 1974, 34, 999-1002.

Eaves, L. C. The early identification of learning disabilities: a follow-up study. Journal of Learning Disabilities, 1974, 7, 632-638.

Eoyce, V. S. The home eye test program. Sight-Saving Review, 1973, 1, 43-48.

Hartlage, L. C., & Lucas, D. G. Group screening for reading disability in first grade children. Journal of Learning Disabilities, 1973, 6, 317-321.

Hull, R. H. Group vs. individual screening in public school audiometry. Colorado Journal of Educational Research, 1973, 13, 6-9.

Jackson, R. M. Methods and results of an every-child program for the early identification of developmental deficits. Psychology in the Schools, 1973, 10, 421-426.

Lesiak, W. J., & Wait, J. A. The diagnostic kindergarten: initial step in the identification and programming of children with learning problems. Psychology in the Schools, 1974, 11, 282-289.

Logan, B. A. Kindergarten screening program for learning disabilities. Journal of School Health, 1975, 45, 413-414.

Mardell, C. For prekindergarten screening information: dial. Journal of Learning Disabilities, 1975, 8, 140-147.

Nitowsky, H. M. Prescriptive screening for inborn errors of metabolism: a critique. American Journal of Mental Deficiency, 1973, 5, 538-550.

Nugent, J. H. A comment on the efficiency of the revised denver developmental screening test. American Journal of Mental Deficiency, 1976, 80, 570-572.

Snyder, C.R. The psychological implications of being color blind. Journal of Special Education, 1973, 7, 51-54.

Telegdy, G. A. The effectiveness of four readiness tests as predictors of first grade academic achievement. Psychology in the Schools, 1975, 12,4-11.

Footnote

The OSI was developed with the support of the Oklahoma State Department of Education. Specimen copies of the OSI may be obtained by writing: Oklahoma State Department of Education, Exceptional Children Section, Oliver Hodge Memorial Education Building, Oklahoma City, Oklahoma, 73105.

Table 1

Test Characteristics by Grade Level

Grade	N	$\bar{x}$	SD	SE_m	R	Mean Diff.	Mean Discrim.
K	4793	17.92	6.55	1.94	0.91	30.89	0.46
1	6138	39.02	9.40	2.33	0.94	67.27	0.43
2	6179	51.74	6.02	1.80	0.91	89.20	0.40

Note. Scores for referral: K below 11 above 31

1 below 29 above 53

2 below 46 - - - - -

Figure 1

Frequency Distributions by Grade Level